



Increase Engagement in Education with Video Streaming

How The University of Maine Changed Their Learning Experience with Wowza

Agenda

- Introductions
- The University of Maine
- BioMedia Lab
- Synapse LCMS
(Learning Content Management System)
- Wowza Streaming Engine
 - VOD Solution
 - Live Solution
- Demo
- Player (Flash, HTML5)
- Mobile (iOS, Android)
- Additional Deployment
- Scalability
- Summary
- Q&A

Presenters



Ron Kozlowski
Director, BioMediaLab
The University of Maine



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Training Manager
Wowza Media Systems

The University of Maine

- Serving roughly 11,000 students
- Maine's flagship research university
- Offering 88 bachelors, 70 masters and 30 doctoral programs
- Main campus in Orono and several satellite locations around the state
- UMaine's athletic teams are nicknamed the Black Bears



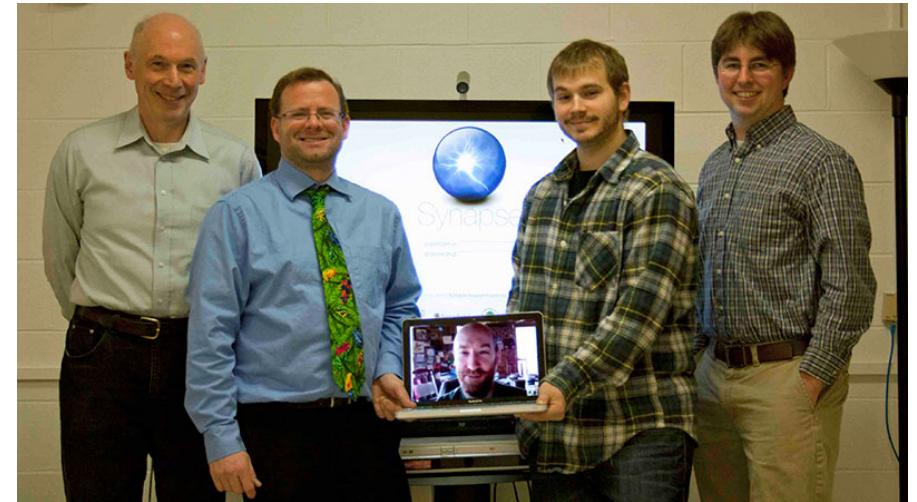
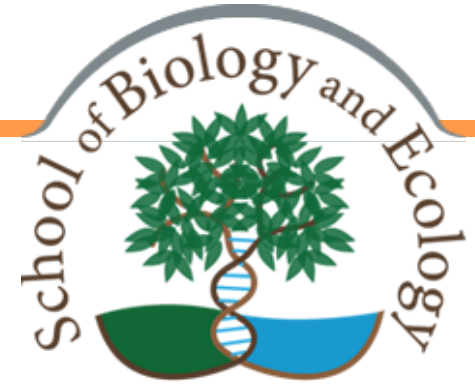
Wowza Media Systems

- Simplifying the complexities of video and audio streaming
- In business since 2005
- Customers in 150+ countries
- Wowza Streaming Engine: award-winning software



UMaine BioMediaLab

- The University of Maine School of Biology and Ecology's BioMediaLab is devoted to enhancing biology education through technology
- Developed Synapse LCMS (Learning Content Management System)
- Developed by students and faculty



Synapse LCMS

- Web-based learning/teaching application
- Serves over 1,500 students per semester
- Covers 22 different courses
- Spans 6 University of Maine campuses
- Provides students with the ability to
 - view lecture materials, including slides, movies, and audio
 - take online tests and quizzes
 - check their grades throughout the semester
 - chat or study with other students
 - receive messages and handouts from their professors.



Synapse
Learning Content Management System

WOWZA STREAMING ENGINE

Wowza Streaming Engine™

- Robust, customizable, and scalable server software that powers reliable streaming of high-quality audio and video to any device anywhere.
- Scale across OSs and architectures.
- From start-up websites to mission critical applications.

The screenshot shows the Wowza Streaming Engine Manager web interface. The top navigation bar includes 'Wowza Streaming Engine Manager', 'Home', 'Server', 'Applications', and 'Help'. The main content area is titled 'Welcome to Wowza Streaming Engine!' and 'Monthly Subscription'. It features several sections: 'Status' with a 'Connections' line graph showing incoming and outgoing connections over time; 'Usage' with a bar chart showing CPU, Memory, and Disk usage; 'Server Uptime' showing the server has been up since 24 Jan 2014 10:20:07 AM; 'AddOns' listing Transcoder, DRM, and nDVR as licensed; and a 'Test Video' section with a 'Test Players...' button. On the right, there is a 'Camera/Encoder Connection Settings' section with fields for Server IP, Port, Application, Stream Name, and Login. Below this is a 'Getting Started With Applications' section explaining the difference between Live and VOD applications.

Wowza Streaming Engine Manager Home Server Applications Help WOWZA | Sign Out

Welcome to Wowza Streaming Engine!

Monthly Subscription

Status

Connections Incoming and outgoing

0 2.5 5 7.5 10

04:00 pm 04:30 pm

Usage CPU, Memory, Heap and Disk

Wowza CPU
Wowza Heap
Total Memory
Total Disk

0% 20% 40% 60% 80% 100%

Server Uptime
Since 24 Jan 2014 10:20:07 AM

AddOns
Transcoder: **Licensed**
DRM: **Licensed**
nDVR: **Licensed**

Test Video

To play a video on demand test video, click the Test Players button.

▶ Test Players...

Camera/Encoder Connection Settings

Use the following settings to publish a stream to Wowza Streaming Engine:

Server IP	10.0.1.142
Port	1935
Application	A live application name on this server
Stream Name	The stream name you want to use
Login	A valid Publisher user name and password

Getting Started With Applications

Wowza Streaming Engine uses **applications** to deliver streaming content. An application is a set of settings for live or video on demand (VOD) streaming. Either use the preinstalled default applications or go to the [Add Application](#) page to easily create and configure new applications.

Live Applications

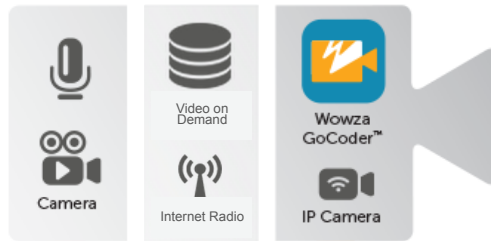
A **live** streaming application is preinstalled to allow you to easily publish video directly from a video encoder or IP camera to Wowza Streaming Engine. Visit the [Wowza Forums](#) for instructions about how to work with common encoders and cameras.

VOD Applications

A **vod** streaming application is also preinstalled with Wowza Streaming Engine. Simply copy video files to the Wowza Streaming Engine **content** directory to stream out via a **VOD** application.

Input/ Publishing

Content Source



Supported Protocols:
» RTSP/RTP
» MPEG-TS
» RTMP
» ICY

Encoder



Wowza Streaming Engine

Prepare

- Transrate
- Transcode
- Transmux
- Encrypt
- ...all on the fly!

Deliver

- Apple® HLS
- MPEG-DASH
- Adobe® HDS
- Microsoft® Smooth Streaming
- RTSP/RTP
- Multicast
- RTMP

Deploy

Deploy OS-independent Wowza Streaming Engine on your physical server or in the cloud



Your Server



Any 3rd party cloud provider

Output/ Playback



Choose Player

Wowza supports all common 3rd party players



Key Capabilities

- Multi-format Streaming
- Live Adaptive bitrate streaming up to 1080P
- Live stream recording & archiving
- Closed caption
- High-quality video streaming (across all devices)
- Security/content protection
- Extensive APIs
- Browser-based manager

Extended Features

- Transcoder AddOn
- nDVR AddOn
- DRM AddOn

Synapse LCMS on Desktop & iOS Using Wowza Streaming Engine

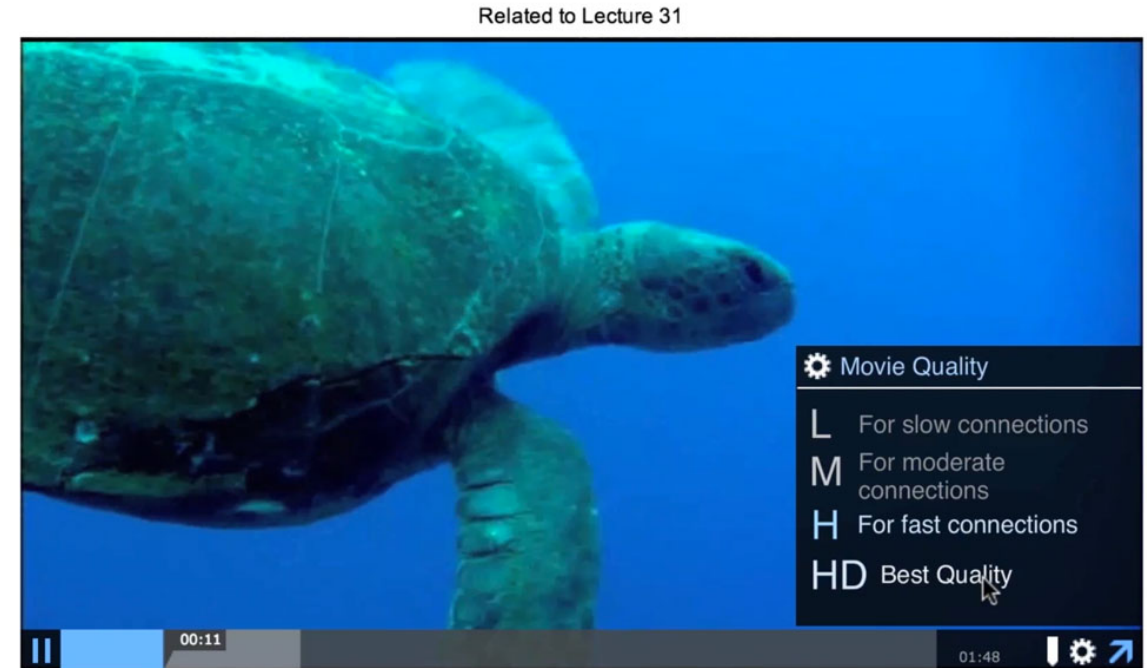
DEMO

Custom Player, Mobile Apps and Deployment

SYNAPSE LCMS

Custom Player vs Pre Built Player

- Custom Player
 - Flash & HTML5
 - Browser/device support
 - Chat for a 2nd screen experience
 - RTMP vs Apple HLS
- Pre-built player
 - JW Player
 - Flowplayer
 - Others



Mobile

- Synapse is available as a mobile app for iOS and Android
- ~25% mobile uses and growing
- Reach any device, anywhere

Synapse Mobile

By BioMediaLab

Open iTunes to buy and download apps.



[View in iTunes](#)

+ This app is designed for both iPhone and iPad

Free

Category: [Education](#)

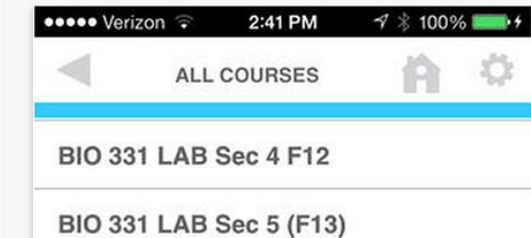
Released: Nov 28, 2013

Description

Synapse Mobile is the mobile version of the learning content management system called Synapse.

[Synapse Mobile Support](#)

Screenshots



Customer Reviews

Thanks for Synapse Mobile ★★★★★

by Non traditional student

This app changed the way I could learn my course material . Now I can study using my mobile devices .

Perfect Mobile Learning Tool ★★★★★

by frozenflat

My classes use Synapse LCMS and now I can review my course material anywhere my mobile phone or ipad can go.

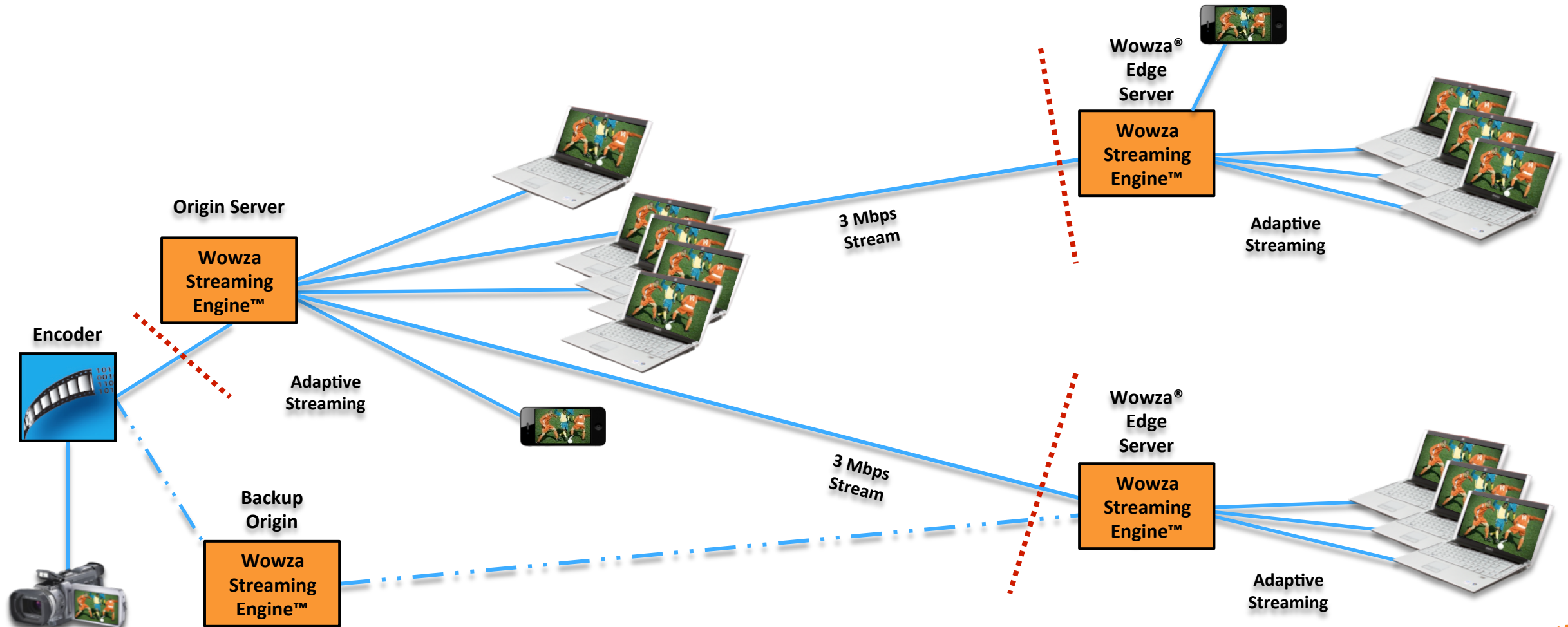
Additional Deployment

- The University's Fundamentals of Public Communication course uses the Synapse system to record students' live presentations
- The Wowza-powered streaming component not only allows the entire class to upload and view these presentations but also collaborate with one another and teaching assistants to provide feedback, critique and grading frame-by-frame for immediate, inline feedback.

Live and On-Demand Scaling

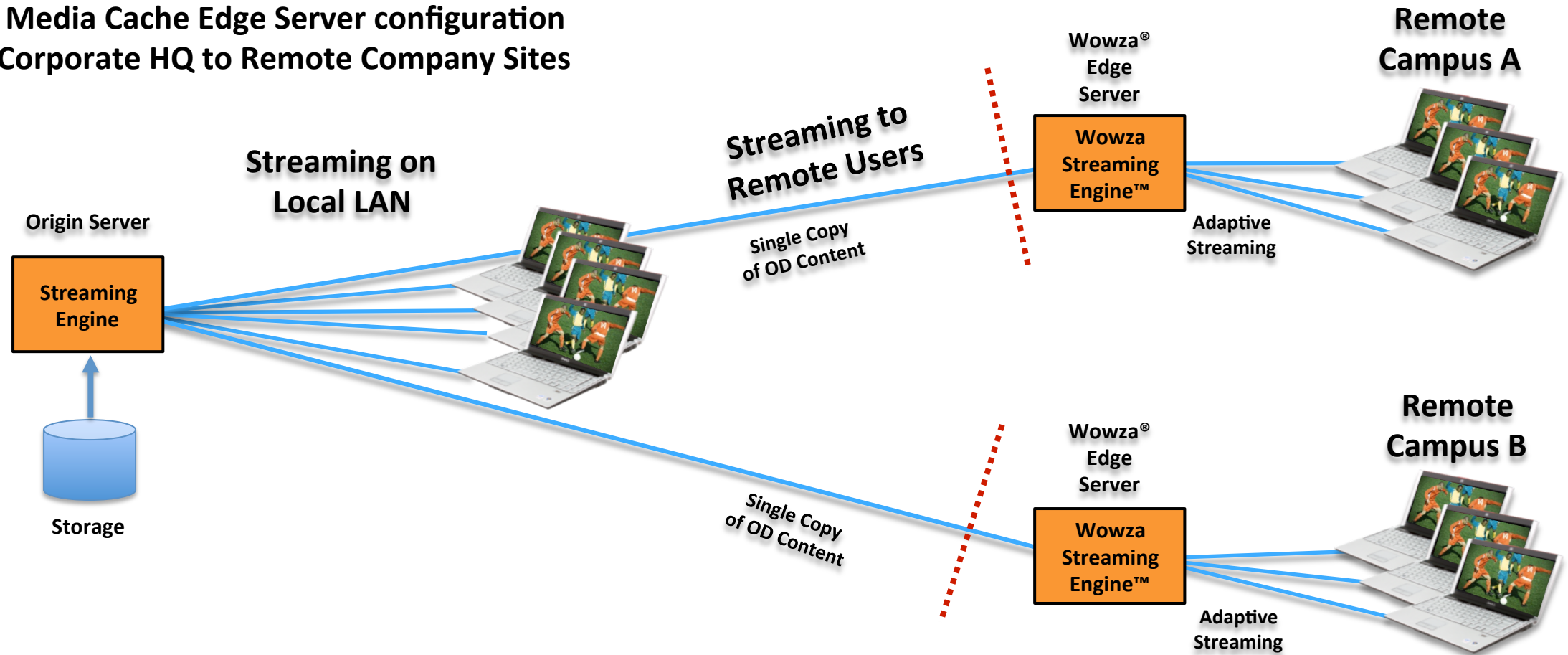
SCALABILITY

Live Stream Origin-Edge Configuration



On-Demand LAN Streaming Scale

Use a Media Cache Edge Server configuration from Corporate HQ to Remote Company Sites



SUMMARY

Summary

- Wowza® software is deployed globally across thousands of universities and K-12 organizations.
- Stream lectures, scientific discoveries, sports, events and more.
- Our platform lets students, faculty, alumni, and supporters engage with your content wherever they are.
- Wowza Streaming Engine™ is tailor-made to deliver cost effective on-line learning programs to audiences anywhere on any device.

Next Steps

- Download a Trial license of Wowza Streaming Engine software from www.wowza.com
- For more on Wowza Streaming Engine Manager:
www.wowza.com/forums/content.php?577-How-to-find-your-way-around-Wowza-Streaming-Engine-Manager
- Read the how-to docs and get assistance at www.wowza.com/forums
- Email sales@wowza.com and join us at www.educause.edu

Wowza Media Systems

QUESTIONS?